

Provo, Utah, February 11, 1915.

To The Honorable A.B. Morgan, Judge:-

In compliance with the order made by Your Honor on December 15th, 1914, the accompanying report is respectfully submitted.

The data on water measurements contained herein are the results of the measurement and distribution made under the direction of your Commissioner during his period of service. The tables of calculated values, showing rates of use and quantities used by most of the larger diversions, are submitted to more clearly bring out these features.

The comments and recommendations are the result of the experience and observation of your Commissioner during the season; and are submitted with the hope that they might be of some value in this litigation.

Your Commissioner was greatly handicapped in the measurement of the flow of some of the canals by the lack of proper measuring devices. In some cases the users neglected to comply with the request to install them; and in the cases of the larger canals, ^{not so equipped} the same were not installed on account of the interference it would have with irrigation operations to divert water from the canals at that season of the year.

Respectfully submitted:

..... *Frank W. Denning*
Water Commissioner.

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WASATCH DIVISION OF
PROVO RIVER.

The Wasatch Division of Provo River as defined in the order of the Court in this cause, dated May 25th 1914, includes all diversions from the River at and above the Wasatch Dam In Wasatch County.

There is a total of 51 diversions, which includes the following corporations diverting water at the Wasatch Dam, namely;

Wasatch Irrigation Company,
North Field Irrigation Company,
Charleston Irrigation Company,
Extension Irrigation Company,
Sage Brush Irrigation Company,

and the following corporations having separate diversions above this point;

Timpanogas Irrigation Company,
Utah Power and Light Company,
South Kamas Irrigation Company,
Washington Irrigation Company,
Sunrise Irrigation Company,

The remaining diversions are those of individuals or associations of individuals using small streams intermittently. The total irrigated area is approximately 15,000 acres.

As shown by the report of Deputy Commissioner, George F. Taylor, a copy of which is submitted herewith, most of the diversions, except those diverting at the Wasatch Dam, are equipped with proper measuring devices; so that with a proper determination of the acreage under each diversion and the installation of the few measuring devices where needed, a just distribution can easily be made in this division. Since most of the canals are small, the distribution among these should be by time in order that a comparatively large head may be used.

Attached hereto and made a part hereof, is a list of the diversions in this division, with the kind of measuring device, approximate acreage and the measurements reported by Deputy Taylor during the season of 1914.

LIST OF DIVERSIONS
AND
WATER DIVERTED IN 1914.

WASATCH DIVISION OF PROVO RIVER. WASATCH AND
SUMMIT COUNTIES.

Diversion No. W-1-a-b-c-d & W-3.

THE STEWART RANCH COMPANY? WOODLAND.

Measuring Devices... All have weirs except W-3.
Approximate acreage..... 630 acs.

Measurements in 1914.

JUNE		JULY		AUGUST		SEPR.	
Day	Sec.ft	Day	Sec.ft	Day	Sec.ft.	Day	Sec.ft.
10	30.30	7	11.00	1	5.00		
18	23.03	9	5.00	5	3.80		
25	7.70	14	6.00	8	0.00		
29	7.50	18	9.60	10	0.00		
		23	7.00	11	0.00		
		31	5.00	15	4.40		
				20	2.20		
				22	2.20		
				24	0.00		
				27	0.00		
				29	0.00		

Diversion No. w-2.

THE SUNRISE CANAL COMPANY, WOODLAND?

Measuring Device.... Good Rating Flume.
Approximate acreage.... 500 acres.

Measurements in 1914.

JUNE		JULY		AUGUST		SEPTEMBER.	
Day	Sec.ft.	Day	Sec.ft.	Day	Sec.ft	Day	Sec ft.
10	10.10	1	12.00	1	6.80	1	3.00
15	11.30	8	10.90	5	5.20	4	2.60
18	10.40	10	11.00	8	6.50		
25	12.60	15	8.00	11	6.50		
29	12.30	18	7.20	16	4.80		
		23	7.00	19	4.00		
				21	4.00		
				24	3.80		
				27	3.80		
				29	4.00		

Diversion No. W-4.

JAMES DUNCAN ET AL.

Measuring Device.... Good weir properly located.
Approximate acreage..... 40. acs.

Measurements in 1914.

JUNE		JULY		AUGUST		SEPTEMBER?	
Day	Sec ft.	Day	Sec. ft	Day	Sec ft.	Day	Sec.ft.
25	0.35	8	0.80	1	0.50		
29	0.83	10	0.80	5	0.00		
		15	0.30	No water used after Aug 1.			
		18	0.80				
		23	0.70				
		31	0.50				

Diversion No.W-5.

SOUTH KAMAS IRRIGATION COMPANY.

Measuring Device.... Good Rating Flume.
Approximate Acreage.....1700 acs.

Measurements in 1914.

JUNE		JULY		AUGUST		SEPTEMBER.	
Day	Sec.ft.	Day	Sec.ft.	Day	Sec. ft.	Day	Sec. ft.
4	39.60	1	36.00	1	33.40	1	14.40
5	37.60	3	32.00	5	31.50	7	13.50
9	28.80		37.00	8	31.30	10	13.50
10	26.70	7	34.00	12	31.50		
	34.40	9	36.00	15	30.00		
14	39.00	14	28.00		28.20		
15	40.80	18	32.90	19	29.50		
18	38.00	23	34.00		16.60		
	36.20		30.00	21	14.50		
25	38.60	31	33.40		16.70		
29	33.00			25	18.20		
					15.70		
				27	16.60		
				30	14.00		
					15.70		

Diversion No.W-6.

WASHINGTON IRRIGATION COMPANY.

Measuring Device....Good Rating Flume.
Approximate Acreage..... 12002 acs.

Measurements in 1914.

JUNE		JULY		AUGUST		SEPTEMBER.	
Day	Sec. ft.	Day	Sec.ft.	Day	Sec.ft.	Day	Sec. ft.
4	26.70	1	26.90	1	16.00	1	9.10
5	30.20		28.00	5	13.20	7	3.10
9	17.00	7	21.60	8	11.30	10	2.00
10	18.00		28.00	12	8.70		
14	30.20	10	27.00	16	11.00		
15	30.20	15	5.60		2.00		
25	27.00	18	18.50	19	14.60		
29	13.40	23	26.50	21	14.60		
			11.50	24	14.40		
		31	16.00	27	14.40		
				30	11.40		
					14.40		

Diversion No.W-7.

PHILLIPS DITCH.

Water is taken from the washington Canal in five places
Measuring Devices five weirs.
Approximate Acreage..... 71.5 acs.

Measurements in 1914.

JUNE		JULY		AUGUST		SEPTEMBER.	
Day	Sec.ft.	Day	Sec.ft.	Day	Sec.ft	Day	Sec. ft.
		1	5.00	1	0.90	1	1.30
		8	1.40	5	2.00	2	1.30
		10	2.50	8	1.20	7	1.10
		15	1.20	12	1.30	10	1.10
		18	2.40	16	2.30		
		23	1.80	20	1.70		
		31	0.90	22	1.70		
				25	2.00		
				28	1.80		
				30	1.40		

8
Diversion No.W-8.

THOMAS WHITE CANAL.

Measuring devices....None.
Approximate Acreage...,Unknown.

Measurements in 1914

JUNE		JULY		AUGUST		SEPTEMBER.	
Day	Sec. ft.	Day	Sec. ft.	Day	Sec. ft.	Day	Sec.ft.
		10	1.00	No water taken after July 18th.			
Sub-irrigated.		16	0.00				
		18	0.50				

Diversion No.W-9.

UPPER MOON DITCH.

Measuring Device..... Good weir properly located.
Approximate Acreage..... 45 acs.

Measurements in 1914.

JUNE		JULY		AUGUST		SEPTEMBER	
Day	Sec.ft	Day	Sec.ft.	Day	Sec.ft	Day	Sec. ft.
Sub-irrigated		8	1.20				
		10	1.30				
		15	1.70	No water taken after July 31.			
		18	0.90				
		23	1.20				
		31	0.00				

Diversion No.10 W.

FITZGERALD AND HARDMAN CANAL.

Measuring Device..... Good Rating Flume properly located.
Approximate Acreage... Unknown.

Measurements in 1914.

JUNE		JULY		AUGUST		SEPTEMBER.	
Day	Sec.ft	Day	Sec.ft	Day	Sec. ft.	Day	Sec.ft.
Sub-irrigated.		7	1.00	1	0.70		
		9	1.50	6	0.80		
		14	2.00	9	0.00		
		18	0.80	13	0.00		
		23	1.00	17	0.00		
		31	0.70	20	0.00		
				22	0.00		
				25	1.70		
				28	0.50		
				30	0.40		

Diversion No.W-11.

LOWER MOON DITCH.

Measuring Device.....Good weir properly located.
Approximate Acreage..... 72 acs.

Measurements in 1914.

JUNE		JULY		AUGUST		SEPTEMBER	
Day	Sec.ft.	Day	Sec. ft.	Day	Sec. ft.	Day	Sec. ft.
Sub-irrigated.		8	1.00	1	0.60		
		10	1.00	6	0.20		
		15	0.80	9	0.00		
		18	0.50	13	0.70		
		23	0.50	17	0.10		
		31	0.60	20	0.40		
				22	0.10		
				25	0.20		
				28	0.10		
				30	0.00		

8
Diversion No. W-12.

CUTLER DITCH.

Measuring Device.....Good Rating Flume properly located.
Approximate Acreage..... 22 270(?)acs.

Measurements in 1914.

JUNE		JULY		AUGUST		SEPTEMBER.	
Day	Sec.ft	Day	Sec. ft	Day	Sec. ft	Day	Sec. ft.
		7	3.20	1	3.00	1	2.00
		10	0.00	6	3.50	8	2.50
		15	3.20	9	3.40	10	2.50
		18	3.20	12	3.40		
		23	3.20	15	2.20		
		31	3.00	19	2.80		
				22	2.60		
				25	2.40		
				28	2.40		
				30	2.60		

Diversion No. W-14.

TURNBOW AND JINES DITCH.

Measuring Device.....Good Rating Flume properly located.
Approximate Acreage..... 17.50 acs.

Measurements in 1914.

JUNE		JULY		AUGUST		SEPTEMBER.	
Day	Sec.ft	Day	Sec.ft	Day	Sec.ft	Day	Sec.ft.
		1	0.80	1	2.00		
		7	1.00	6	0.80		
		9	0.00	9	0.50		
		14	1.00	12	0.50		
		18	1.30	15	0.00		
		23	1.90				
		31	2.00				

No water taken after
August 15th.

Diversions Nos.w-15-a-b-c-

ETHER WEBB CANALS.

Measuring Devices.... Good weirs in all except 15-c.
Approximate acreage..... 94 acs.

Measurements in 1914.

JUNE		JULY		AUGUST		SEPTEMBER.	
Day	Sec. ft	Day	Sec.ft	Day	Sec. ft	Day	Sec. ft.
		2	2.00				
		7	0.00				
		9	0.00				
		15	0.00				
		18	0.00				
		23	4.60				

"o water taken after July 23rd.

Diversion No.W-13.

JAMES A.KNIGHT CANAL NO 1.
Measuring Device.... Good weir properly located.
Approximate Acreage.....Unknown.

Measurements in 1914.

JUNE		JULY		AUGUST		SEPTEMBER.	
Day	Sec.ft	Day	Sec.ft.	Day	Sec. ft	Day	Sec. ft.
4	4.40	1	4.40	1	0.00	1	0.00
30	0.00	2	0.00	6	0.00	7	1.30
		7	1.80	9	0.00	10	1.30
		9	2.00	12	0.00		
		13	0.70	16	0.00		
		18	0.00	19	0.00		
		23	0.00	22	0.00		
		31	0.00	25	0.700		
				28	0.70		
				30	0.00		

Diversion No.W-16.

JAMES A.KNIGHT CANAL NO.2.

Measuring Device.....Good weir properly located.
Approximate Acreage..... Unknown.

Measurements in 1914.

JUNE		JULY		AUGUST		SEPTEMBER	
Day	Sec.ft.	Day	Sec.ft	Day	Sec. ft.	Day	Sec. ft.
14	4.50	1	0.00	1	2.00		
18	4.60	7.	2.00	6	1.90		
25	2.03	9	1.50	9.	1.90		
30	2.03	14	2.00	12	0.00		
		18	2.00				
		23	3.00				
		31	2.00				

No water taken af-
ter Aug. 12.

Diversion No.W-17.

JAMES A. KNIGHT CANAL NO.3.

Measuring Device.....None.
Approximate Acreage.Unknown.

Measurements in 1914.

JUNE		JULY		AUGUST		SEPTEMBER?	
Day	Sec.ft.	Day	Sec.ft	Day	Sec.ft	Day	Sec.ft.
4	4.40	2	2.00	1	0.00		
30	2.00	7	0.00	6	2.10		
	4.50	9	0.00	9	2.10		
		14	0.00	14	1.00		
		18	0.00	18	0.00		
		23	0.00	22	0.00		
		31	0.00				

No water after
Aug. 14th.

* Note:- James A.Knight Claims to irrigate 300 acres from the
above canals, (..-13-16 & 17),The acreage under each being unknown.

8
Diversion No. w-17-a

OLA W. LARSEN CANAL NO 1.

Measuring Device..... Good weir properly located.
Approximate Acreage..... Unknown.

Measurements in 1914.

JUNE		JULY		AUGUST		SEPTEMBER.	
Day	Sec.ft.	Day	Sec.ft.	Day	Sec. ft.	Day	Sec. ft.
30	1.30	1	1.30	1	0.50		
		8/	0.00	6	1.30		
		10	0.00	9	1.30		
		15	0.00	12	1.30		No water after
		18	0.00	15	0.00		Aug. 12 th.
		22	0.70				
		31	0.50				

July 3 - 1.20

Diversion No. w-17-b.

OLA W. LARSEN CANAL NO.2.

Measuring Device..... Good weir properly located.
Approximate Acreage..... Unknown.

Measurements in 1914.

JUNE		JULY		AUGUST		SEPTEMBER.	
Day	Sec.ft.	Day	Sec.ft.	Day	Sec.ft	Day	Sec.ft.
30	1.30	1	1.60				
		8	1.30				
		10	1.58				
		15	0.00		No water taken after		
		19	0.00		July 10th.		

Diversion No. 17-c.

OLA W. LARSEN CANAL NO. 3.

Measuring Device..... Good weir properly located.
Approximate Acreage..... Unknown.

Measurements in 1914.

JUNE		JULY		AUGUST		SEPTEMBER.	
Day	Sec.ft.	Day	Sec. ft.	Day	Sec. ft.	Day	Sec.ft.
3	4.30	1	2.00				
	1.10	19	1.70				
8	0.00	22	0.00				
10	0.00				No water taken after		
15	2.00				July 10th.		
30	2.00						

Diversion No. 17-d.

OLA W. LARSEN CANAL NO 4.

Measuring Device..... Good weir properly located.
Approximate Acreage..... Unknown.

Measurements in 1914.

JUNE		JULY		AUGUST		SEPTEMBER.	
Day	Sec..ft	Day	Sec. ft	Day	Sec.ft	Day	Sec.ft
30	1.70	1	1.70				
		7	0.00				
		9	0.00		No water taken after		
		15	0.40				
		19	0.50				
		23	0.80				

July 23rd.

Ola W. larsen claims to irrigate 120 acres from the above 4 canals,
(w-17-a-b-c-d-), the acreage under each being unknown.

8
Diversion No.w.18-a

RASMUS LARSEN CANAL NO. 1.

Measuring Device.....Good weir properly located.
Approximate AcreageUnknown.

Measurements in 1914.

JUNE		JULY		AUGUST		SEPTEMBER.	
Day	Sec.ft	Day	Sec.ft	Day	Sec.ft	Day	Sec.ft
30	1.20	8	1.30	Measurements taken up to Aug.10 show no water diverted after July 8th.			

Diversion No. 18-b.

RASMUS LARSEN CANAL NO. 2.

Measuring Device.....Good weir properly located.
Approximate Acreage.....Unknown.

Measurements in 1914.

JUNE		JULY		AUGUST		SEPTEMBER.	
Day	Sec.ft	Day	Sec.ft	Day	Sec.ft	Day	Sec.ft.
30	0.00	8	0.80	Measurements taken up to Aug. 9th show no water diverted after July 8th			

Diversion No. 18-c.

RASMUS LARSEN CANAL NO. 3.

Measuring Device.....Good weir properly located.
Approximate Acreage.....Unknown.

Measurements in 1914.

JUNE		JULY		AUGUST		SEPTEMBER.	
Day	Sec.ft	Day	Sec.ft	Day	Sec.ft	Day	Sec.ft.
30	4.30	1	4.30	1	0.50		
		8	4.10	8	0.50		
		10	4.10	10	0.50		
		15	1.00				
		18	1.00	No water taken after Aug. 10th.			
		19	1.00				
		23	1.00				
		31	0.50				

** Rasmus Larsen claims to irrigate 200 acres from the above 3 canals
(w-18-a-b-c-), the acreage under each being unknown.

Diversion No.19-a.

WILLIAM LEMON CANAL NO.1.

Measuring Device.....Good weir properly located.
Approximate Acreage.....Unknown.

Measurements in 1914.

JUNE		JULY		AUGUST		SEPTEMBER.	
Day	Sec.ft	Day	Sec.ft	Day	Sec.ft.	Day	Sec.ft.
		1	1.00	1	1.40		
		3	0.98	6	1.90		
		8	0.00	9	1.40		
		10	0.00	12	1.30	No water diverted af-	
		15	0.00	15	1.40		
		16	0.00	19	1.30	ter Aug. 22nd.	
		19	1.30	22	1.30		
		23	0.40				

Diversion No. 19-b.

WILLIAM LEMON CANAL NO. 2.

Measuring Device.....Good weir properly located.
Approximate Acreage.....Unknown.

Measurements in 1914.

JUNE		JULY		AUGUST		SEPTEMBER.	
Day	Sec.ft.	Day	Sec.ft	Day	Sec. ft	Day	Sec.ft.
30	1.00	1	2.50	1	0.00	1	0.40
		3	0.00	6	0.00	4	0.00
		8	0.00	9	0.20	7	0.00
		10	0.60	13	0.00	9	0.00
		15	0.00	16	0.00	13	1.40
		16	0.00	19	0.00		
		19	0.00	22	0.00		
		23	0.00	25	0.00		
		31	1.40	28	0.00		
				30	0.00		

William Lemon Claims to irrigate 200 acres from the above 2 canals
2 (w-19-a-b-), the acreage under each being unknown,

Diversion No. w-20.

LARSEN AND BATES CANAL.

Measuring Device.....Good weir properly located.
Approximate Acreage.....Unknown.

Measurements in 1914.

JUNE		JULY		AUGUST		SEPTEMBER.	
Day	Sec.ft.	Day	Sec.ft	Day	Sec.ft	Day	Sec.ft.
11	4.20	1	1.20	1	1.70	1	0.30
19	2.00	3	1.10	6	1.00	7	1.00
24	1.30	8	2.20	9	0.60	10	1.00
27	0.90	10	1.10	13	0.50	13	0.60
28	1.80	15	1.60	16	0.30		
30	1.40	16	1.10	20	0.30		
		19	0.00	22	0.70		
		23	0.40	25	0.50		
		31	1.70	28	0.50		
				31	0.20		

Diversion No. 21-a.

JACK BATES CANAL NO1.

Measuring Device.....Good weir properly located.
Approximate Acreage.....Unknown.

Measurements in 1914.

JUNE		JULY		AUGUST		SEPTEMBER.	
Day	Sec.ft.	Day	Sec. ft.	Day	Sec .ft	Day	Sec.ft.
30	1.70	1	1.70	1	0.00		
		3	1.70	6	0.00		
			0.00	9	0.00		
		7	1.30	12	0.00		
		10	1.60	15	0.00		
		14	1.70	19	0.00		
		16	0.00	22	0.00		
		19	0.00	25	0.00		
		23	0.00	28	0.00		
		31	0.00	31	1.10		

8

Diversion No. 21-b

Jack Bates Canal No.2.

Measuring Device.....Good weir properly located.
Approximate Acreage.....Unknown.

Measurements in 1914.

JUNE		JULY		AUGUST		SEPTEMBER.	
Day	Sec.ft.	Day	Sec.ft.	Day	Sec.ft.	Day	Sec.ft.
30	5.00	4	4.70	1	0.00		
			1.50	6	0.00		
		7	0.00	9	0.00		
		10	0.00	13	0.00		No water diverted
		14	0.00	17	0.00		
		16	2.20	19	0.00		after Aug. 27th.
		19	1.40	21	1.70		
		23	1.50	24	1.60		
		31	0.00	27	1.60		
				31	0.00		

Diversion No.21-c.

JACK BATES CANAL NO 3.

Measuring Device.....Good weir properly located.
Approximate Acreage.....Unknown.

Measurements in 1914.

JUNE		JULY		AUGUST		SEPTEMBER.	
Day	Sec.ft	Day	Sec.ft	Day	Sec.ft	Day	Sec. ft.
30	4.80	3	4.50	1	0.00	4	0.60
			1.30	7	0.00	8	0.50
		7	0.00	10	0.00	10	0.50
		10	0.00	13	0.00	13	0.00
		14	0.00	17	1.80		
		16	0.00	20	1.80		
		19	0.00	22	0.00		
		23	0.00	25	0.00		
		31	0.00	28	0.00		
				31	0.00		

Diversion No.21-d.

KACK BATES CANAL NO 4.

Measuring Device..... Good weir properly located.
Approximate Acreage.....Unknown.

Measurements in 1914.

JUNE		JULY		AUGUST		SEPTEMBER.	
Day	Sec.ft.	Day	Sec.ft	Day	Sec.ft	Day	Sec.ft.
30	0.00	3	2.20				
		7	0.00				
		10	0.00				
		14	0.00				
		16	0.00				
		19	0.00				
		23	0.00				
		31	0.00				

Measurements up to Sept. 13 show
no water diverted after July 3rd.

Jack Bates Claims to irrigate 90 acres from the above 4 canals
(w-21-a-b-c-d-),the acreage under each being unknown.

Diversion No. w-22.

HAROLD C. BEST CANAL.

Measuring Device.....None.

Approximate Acreage160 acs.

Measurements in 1914.

JUNE		JULY		AUGUST		SEPTEMBER.	
Day	Sec.ft.	Day	Sec.ft	Day	Sec.ft	Day	Sec. ft.
		3	1.00				
		8	1.00				
		10	0.30				
		15	0.30				
		16	0.30				
		19	0.40				
		23	0.30				
		31	0.00				

Measurements up to Sept. 13 show no
water diverted after July 23rd.

Diversion No.23.w.

UTAH POWER AND LIGHT COMPANY, POWER.

Measuring Device.....Good weir in tail race.

Approximate Acreage.....water used to develop power at the Murdock
Plant.

Measurements in 1914.

JUNE		JULY		AUGUST		SEPTEMBER.	
Day	Sec.ft.	Day	Sec.ft	Day	Sec.ft	Day	Sec. ft.
13	65.70	2	68.70	5	98.80	1	51.90
16	76.20	6	42.30	6	99.70	2	55.80
17	99.90	9	59.80	8	98.80	4	63.80
19	81.60	13	40.70	9	99.70	7	63.80
24	80.10	15	47.40	11	98.80	10	56.60
27	62.80	16	47.40	12	99.70		
28	85.40	19	45.20	15	79.90		
30	80.10	20	70.40	18	68.70		
		22	51.90	21	50.40		
		26	81.60	24	51.20		
		27	97.00	25	50.40		
		29	97.90	28	51.90		
				31	55.80		

Diversion No. w-23-a.

UTAH POWER AND LIGHT COMPANY, IRRIGATION.

Measuring Device.....None.

Approximate Acreage.....Unknown.

Measurements in 1914.

JUNE		JULY		AUGUST		SEPTEMBER.	
Day	Sec. ft.	Day	Sec.ft	Day	Sec.ft	Day	Sec. ft.
		3	0.60				
		7	1.00				
		9	1.00				
		14	1.00				
		16	1.00				
		19	0.50				
		23	0.60				
		31	1.00				

Measurements up to Sept. 13 show
no water diverted after July 31st.

8
Diversion No.W-24.

W.H.WALKER CANAL.

Measuring Device.....None.

Approximate Acreage.....Unknown.

Measurements in 1914.

JUNE		JULY		AUGUST		SEPTEMBER?	
Day	Sec.ft	Day	Sec. ft.	Day	Sec. ft.	Day	Sec.ft.
		1	1.00				
		3	0.60				
		7	1.30				
		9	1.00				
		14	1.00				
		16	1.00				
		19	0.60				
		23	0.60				
		31	1.00				

Measurements up to Sept. 13
show no water diverted after July 31.

Diversion No.W-25

GEORGE DAVIS CANAL.

Measuring Device.....None.

Approximate Acreage.....Unknown.

Measurements in 1914.

JUNE		JULY		AUGUST		SEPTEMBER?	
Day	Sec.ft.	Day	Sec. ft.	Day	Sec. ft.	Day	Sec. ft.
		3	0.70	1	0.00		
		7	0.00	7	0.00		
		9	0.00	10	0.00		
		14	1.80				
		16	0.60				
		19	0.70				
		23	0.00				
		31	0.00				

Diversion No.W-26.

LEVI NORTH CANAL.

Measuring Device.....Good weir properly located.

Approximate Acreage.....80 acs.

Measurements in 1914.

JUNE		JULY		AUGUST		SEPTEMBER.	
Day	Sec.ft	Day	Sec.ft	Day	Sec. ft	Day	Sec. ft.
24	1.10	3	0.70	1	0.50	1	0.20
27	1.10	7	0.70	7	0.50	7	0.30
28	1.10	9	1.70	10	0.30	10	0.30
30	0.80	14	0.60	13	0.30	13	0.20
		16	0.60	16	0.30		
		19	0.60	19	0.30		
		23	0.60	22	0.10		
		31	0.50	25	0.30		
				28	0.30		
				31	0.20		

Diversion No. W-27.

JOHN BUTTERY CANAL.

Measuring Device.....Good weir properly located.
Approximate Acreage.....50 acs.

Measurements in 1914.

JUNE		JULY		AUGUST		SEPTEMBER.	
Day	Sec. ft.	Day	Sec. ft.	Day	Sec. ft.	Day	Sec. ft.
		3	1.50	1	0.50	1	0.40
		7	1.50	7	0.30	7	0.60
		9	0.70	10	0.20	10	0.60
		14	1.10	14	0.10	13	0.60
		16	1.10	17	0.20		
		19	0.50	19	0.80		
		23	1.20	22	0.80		
		31	0.50	25	0.80		
				28	0.80		
				31	0.40		

Diversion No. W-28.

GEORGE DAVIS CANAL.

Measuring Device.....Rating Flume.
Approximate Acreage..... Part of 100 acs. (George Davis and Mary J. Davis claim $\frac{1}{2}$ 100 acs. each, part of which is irrigated from this canal and part from W-25 and W-26)

Measurements in 1914.

JUNE		JULY		AUGUST		SEPTEMBER.	
Day	Sec. ft.	Day	Sec. ft.	Day	Sec. ft.	Day	Sec. ft.
		1	2.00	1	0.50	1	2.40
		3	2.40	7	0.40	7	1.80
		7	0.00	10	0.40	10	2.00
		9	0.00	14	0.00	13	2.40
		14	0.00	17	0.00		
		16	0.00	20	0.00		
		19	0.20	22	0.00		
		23	0.00	25	0.00		
		31	0.00	28	0.00		
				31	2.40		

Diversion No. W-29.

JOSEPH MORRIS CANAL.

Measuring Device.....Good Rating flume.
Approximate Acreage.....Unknown.

Measurements in 1914.

JUNE		JULY		AUGUST		SEPTEMBER.	
Day	Sec. ft.	Day	Sec. ft.	Day	Sec. ft.	Day	Sec. ft.
11	19.90	1	5.00	1	2.30	1	0.30
		3	6.00	13	0.20	7	0.30
		7	4.00	16	0.20	10	0.30
		9	3.60	19	0.00	13	0.30
		14	3.60	22	0.00		
		16	0.30	25	0.30		
		19	1.00	28	0.00		
		23	0.20	31	0.00		
		31	2.00				

Diversion No. w-30-a-b-.

THOMAS LAWRY ET AL CANAL.

Measuring Device.....weir, not properly located .
Approximate Acreage....._60. acres.

Measurements in 1914.

JUNE		JULY		AUGUST		SEPTEMBER.	
Day	Sec. ft.	Day	Sec. ft.	Day	Sec. ft.	Day	Sec. ft.
		1	4.50	1	0.50	1	0.50
		3	4.00	7	0.00	7	0.00
			2.00	10	0.00	10	0.50
		7	2.00	13	0.00	13	0.00
		9	1.50	16	0.50		
		14	0.70	19	0.50		
		16	1.00	22	0.50		
		19	0.70	25	0.50		
		23	0.00	28	0.40		
		31	0.50	31	0.50		

Diversion No. #31.

TIMPANOGAS IRRIGATION COMPANY.

Measuring Device.....Good Rating Flume.
Approximate Acreage.....w 2000 acs.

Measurements in 1914.

JUNE		JULY		AUGUST		SEPTEMBER?	
Day	Sec. ft.	Day	Sec. ft.	Day	Sec. ft.	Day	Sec. ft.
12	58.80	2	50.00	1	42.50		
13	62.30	7	57.60	7	40.30		
23	61.70	9	54.40	10	38.70		
24	62.30	14	46.80				
27	60.60	16	44.00				
28	60.60	19	35.20				
30	61.70	23	35.00				
		31	42.50				

Diversion No. w-33.

GEORGE JORDAN ET AL CANAL.

Measuring Device.....Good weir not properly located.
Approximate Acreage~~22~~ 100 acs.

Note: In the following measurements, some water is cahrged to this di-
version which is not diverted directly from the river, but leaks from the
flume of the Heber City Light and Power Company and runs onto the lands
of Mr. Jordan et al.

Measurements in 1914.

JUNE		JULY		AUGUST		SEPTEMBER.	
Day	Sec. ft.	Day	Sec. ft.	Day	Sec. ft.	Day	Sec. ft.
		1	7.00	1	1.90		
		3	6.00	7	0.60		
		7	8.20	10	1.80		
			4.20	13	1.80		
		9	1.50	16	1.30		
		14	2.40	19	0.60		
		16	2.70	22	0/50		
		19	3.20	25	2.50		
			1.60	28	2.60		
		23	2.60	31	0.00		
		31	1.90				

Diversion No.W-34.

ISAAC R. PAUM CANAL.

Measuring Device.....None.
Approximate Acreage.....100 acs.

Measuerments in 1914.

JUNE		JULY		AUGUST		SEPTEMBER.	
Day	Sec.ft.	Day	Sec.ft.	Day	Sec. ft.	Day	Sec.ft.
		8	1.50	16	0.80		
		10	1.50	19	0.50		
		14	1.50	22	0.50		
		16	1.00	25	1.60		
		19	0.80	28	0.00		
		23	0.70	31	0.80		
		31	0.00				

Diversion No.W-35.

WASATCH IRRIGATION COMEENY.
NORTH FIELD IRRIGATION COMPANY
AND OTHERS.

Measuring Device.....None.
Approximate Acreage. ~~7100~~ ~~5000~~ acs.

Measurements in 1914.

JUNE		JULY		AUGUST		SEPTEMBER.	
Day	Sec.ft	Day	Sec. ft.	Day	Sec. ft.	Day	Sec. ft.
12	204.10	1	180.00	1	122.00	1	75.50
30	170.00	7	153.00	7	122.00	2	74.60
		9	160.00	10	112.00	7	56.90
		14	150.00	13	111.0	10	50.30
		16	123.00	16	114.50	13	56.50
		19	112.00	20	97.00		
		23	160.00	25	85.60		
		31	124.00	28	95.50		
				31	72.40		

MEASUREMENTS OF FLOW

OF

WATER FROM ONTARIO DRAIN TUNNEL L914.

Gaging Station located at County Road crossing of Tunnel Creek near its confluence with the Provo River. Measurements made and reported by Deputy Commissioner, George F. Taylor.

Month							
JUNE		JULY		AUGUST		SEPTEMBER.	
Day	Sec.ft.	Day	Sec.ft.	Day	Sec.ft.	Day	Sec.ft.
11	19.80	1	14.70	5	18.10	1	18.70
13	17.80	3	16.70	6	18.10	4	18.40
16	17.50	6	17.30	8	18.40	5	18.40
17	17.30	7	18.60	9	18.40	7	18.40
19	17.30	10	17.30	11	17.50	10	18.40
23	15.90	14	17.80	12	17.30	14	17.80
24	17.30	16	17.30	15	17.80		
27	16.70	17	17.30	18	18.10		
28	17.30	19	17.30	21	17.50		
30	15.20	20	20.30	24	18.60		
		21	20.30	25	18.60		
		23	18.40	26	18.60		
		27	17.80	28	18.60		
		28	17.80	30	18.80		
		29	18.40				
		30	18.40				

Of the total flow of Tunnel Creek, 5.50 Sec.ft. was turned to the Midway Irrigation Company and the balance to the Provo Reservoir Company.

THE UNION RESERVOIRS.

The reservoir system of the Union Reservoir Company consists of three comparatively large lake-reservoirs, namely: Washington Lake Reservoir, Trial Lake Reservoir and Wall Lake Reservoir, and thirteen smaller reservoirs, all of which are tributary to the three named above. These lakes are made to serve as reservoirs by placing dams across the outlet channels and providing gates with which to regulate the flow therefrom.

The out-flow from all of these reservoirs unites in a common channel some distance below Trial Lake outlet. The stream was measured in this channel during 1914 by means of a gaging station in the natural solid rock channel, about 2000 feet below the outlet from Trial Lake Reservoir. This station is very unsatisfactory for the proper measurement of the flow, on account of the high velocity and on account of the difficulty of reading the gage properly due to the rough water surface. When the flow exceeds 50 second-feet, a difference in gage height of 0.01 ft. makes a corresponding difference in discharge of approximately 9 second-feet, and since it is very difficult to read the gage even to the nearest 0.01 ft., the measurements could very easily be in error 5 second feet at this stage.

During the year 1914, daily gage readings were taken at this station by George A. Clift Jr. from July 15th to Sept. 4th, the period during which storage water was being drawn. A rating curve was compiled for the station from 5 measurements made by I.H. Jacob, & 7 measurements made by Frank W. Deming and 1 measurement made by George F. Taylor. This curve was used to determine the daily discharge as reported herein.

The natural out-flow was measured by your Commissioner on July 17th and found to be 4.20 second-feet. On August 26th, an estimate of the inflow to these reservoirs was made by C.S. Jarvis, Engineer for the Company, who placed it at 2.10 second-feet. The average of these two determinations or 3.15 second-feet was taken as the average natural out-flow for the period during which the storage was being released.

A copy of the daily discharge in second-feet and the quantities in acre-feet is attached hereto, also an estimate of the total storage for the year 1914.

These data show a total storage of 4361 acre-feet, which, according to the Secretary of the Company, is divided among the various companies in interest as follows:

Wasatch Irrigation Company	7/28.....	1090 ac.ft/
Timpanogas Irrigation Company	7/28.....	1090 " "
Sego Irrigation Company	2/28	310 " "
Provo Reservoir Company.	12/28	1870 " "

In addition to the 12/28 interest in the storage of the Union Reservoir Company, noted above, the Provo Reservoir Company operates three systems of smaller reservoirs known as (1) The North Fork System, (2) The Lost Lake System, and (3) The Haystack System.

On account of there being no suitable measuring devices in the various outlet channels, no reliable data on the outflow from these reservoirs were obtained during 1914. A series of measurements made at the two stations on the North Fork System, extending over the period from July 16th to August 13th gives the following data on outflow: Average flow from July 16th to August 2nd, at which latter time the storage was released, 4.14 second-feet. Average flow from August 2nd to August 13th, 12.60 second-feet. These measurements reduced to acre-feet are given below-

12.60 second feet for 12 days.....	302.0 acre-ft.
4.14 second-feet for 12 days, which is taken as the natural outflow during the drawing period..	99.0 acre-ft.
Due to Storage.....	203.0 " "

The following table gives the total storage of the Provo Reservoir Company as shown by the best available data; the available storage in the Lost Lake and Haystack Systems being taken from the report of C.S. Jarvis, Engineer.

12/28 interest in the storage of the Union	
Reservoirs as given above.....	1870 ac.ft.
North Fork System as given above.....	203 ac.ft.
Haystack System from report of C.S. Jarvis.....	100 ac.ft.
Lost Lake System from report of C.S. Jarvis.....	140 ac.ft.

Total Storage for the year 1914..... 2313 ac.ft.

Due to the inaccuracies in measurements noted above, these totals of the Union Reservoir Company and The Provo Reservoir Company may be considerably in error, however, these are the best available data, till proper measuring devices are installed, which should be done before the water is released this year.

1914.

Gaging Station Located about 2000 feet below the outlet from Trial Lake Reservoir. Measures all of the stored water of the Union Reservoir Company, including natural out-flow.

Gage Readings By George A. Clift Jr.
Computations By Frank W. Deming.

Total in Acre-feet for the year.....	4682.00	Ac.ft.
Estimated natural out-flow for the period		
3.15 sec.ft.for 51 das.....	321.00	Ac.ft.
Total Storage.....	<u>4361.00</u>	Ac.ft.

Total in Acre-feet for the year.....	4682.00	Ac.ft.
Estimated natural out-flow for the period		
3.15 sec.ft.for 51 das.....	321.00	Ac.ft.
Total Storage.....	<u>4361.00</u>	Ac.ft.

REPORT OF
DEPUTY COMMISSIONER, C. F. TAYLOR.

Provo, Utah, Sept. 11, 1914.

Mr. Frank W. Deming,

Provo, Utah.

Dear Sir:-

At your request, I am reporting the conditions and recommendations on the canals and ditches in the upper division of the Provo River.

The water at the Wasatch Dam has been diverted from the River into the canal by means of flash boards during the season. These boards were not even nailed or fastened. They warp and draw out of place; thus allowing more or less water to pass through and causing the flow passing the dam to vary. They can stop the greater part of the water leaking through the flash boards by nailing them and placing a canvas in front of them.

The Wasatch, North Field and Charleston Canals have not a suitable measuring device. They should have a weir or rating flume and an automatic register to give the flow in their canals. The automatic register is necessary because the canals are below the two power plants and they cause the water to fluctuate in the river below.

The Isaac R. Baum ditches have no measuring devices, but weirs or rating flumes can be placed in them.

The Timpanogas Canal has a good rating flume and no change is necessary.

The Heber Power Plant has no measuring device. They have a good place to put in a weir and it should be built so as to have an automatic register. Their flume is in very poor shape, allowing as much as ten second-feet to leak out and pass down into fields or pastures below the road where a part is used for irrigation purposes by the farmers. Something should be done to prevent this water from being used by those who have no right to it and also to get it back into the River or canal below. The best thing to do would be to repair the flume. It is not possible to prevent some water from leaking through the flume; but a right of way and ditch should be had to convey the water to the river or canal after it gets out of the flume.

The George Jordan ditch has a good weir but it is too far from the head gate and require too much time to regulate it. A weir should be placed near the head gate.

The Lawry Ditches have not suitable measuring devices. The weir was placed so as to measure the total flow from the spring and also from the river. A weir should be placed in each ditch if possible. The channel from the river is large and it may not be possible to locate a place where a weir would stay during high water.

The main Morris ditch has a good rating flume properly located. There are two other Morris ditches and they have no measuring devices. They seldom use these two ditches. One of them was not used this year that I know of. The other one was used about three times. Weirs or rating flumes should be placed in them for another year.

The Davis Brothers have a small ditch which heads in the channel conveying the Tunnel water. It should have a small weir.

The Davis ditch which gets water from the river should have a rating flume or a weir near its head. I used the flume over the tail race at the Murdock Power Plant this year; but it is too far from the head of the ditch and some land is irrigated above this flume.

The channel conveying the Tunnel water has no measuring device. A weir or rating flume should be installed before another season in order to tell how much water is added to the river from this stream. A weir would be better than a rating flume wherever it can be properly placed. There is plenty of fall and also a good place for a weir just below the point where the Morris ditch heads.

The John Buttery ditch has a good weir.

The Levi North ditch has a good weir.

The George Davis ditches have no measuring devices as they were not used to speak of except during high water this year when the water was too high to put in weirs.

The W.H. Walker ditch has no measuring device; but it should have a weir. The same is true of the Utah Power and Light ditch.

The Harold C. Best ditches have no measuring devices as they only drew water during high water. The river cut a new channel around the head of these ditches and made it expensive to make a dam high enough to turn water into these ditches. They should have weirs for another year.

The four ditches belonging to John Bates all have good measuring devices properly located.

The Larsen and Bates ditch has a good weir properly located.

The William Lemon ditches have good weirs properly located.

The Rasmus Larsen Ditches have good weirs properly located.

The Ola W. Larsen ditches have good weirs properly located.

The James A. Knight ditches #13 and #16 have good weirs properly located.

The James A. Knight ditch #17 has no measuring device. It is only used for high water and the water would flow over on all sides of the weir and head gate.

The Ether Webb ditches ,#15-a and #15-b have good weirs properly located. The Ether Webb ditch from Webb Creek has no measuring device. It should have a weir.

The Turnbow and Gines ditch has a good rating flume properly located.

The Cutler ditch has a good rating flume properly located.

The Nephi and William Moon ditch has a good weir properly located.

The Fitzgerald and Hardman ditch has a good rating flume properly located.

The(Upper) Moon ditch has a good weir properly located.

The Thomas White ditches have no measuring devices. They have not used water except high water.

The Phillips ditch~~es~~ has six branches, but two are headed at the same place and one weir will do for these two. There are five weirs in this system. Some ~~66~~ of them could be lowered and it would help cases; because as they~~re~~ are at present the water has to be backed up in the Washington Canal in order to pass over the weirs. The one used the most is properly located.

The Washington Canal has a good rating flume properly located, ~~except that there is no water coming out of the canal below the rating flume~~

This canal has a poor head gate and the dam is also in a bad shape.

They need a better head gate and dam in order for the water commissioner or any one else to regulate the water in the canal.

The South Kamas has a good rating flume properly located, except that there is water seeping out of the canal below the rating flume which flows directly into the Washington Canal above its rating flume where it is measured again. It would be more just for the owners under the South Kamas Canal to have their rating flume moved down the canal even with that of the Washington, or better still have both rating flumes put on top of the bench; because the water that seeps through the lower bank of these canals gets into the spring creek below the hill and is conveyed to the river.

The J.M. Duncan ditch has a good weir properly located. This ditch has a very small stream all season which is claimed for culinary and domestic purposes.

The Stewart Brothers ditch #3 has no measuring device; it should have a rating flume as it has not fall enough for a weir.

The Sunrise Canal has a good rating flume properly located.

The Stewart Brothers four ditches #1-a-b-c & d all have good measuring devices.

I would recommend a trapezoidal weir in all cases where the conditions are suitable for a weir of that kind. The farmers can learn to measure the water over the crest of the weir and know for themselves what their ditch is drawing.

The Murdock Power Plant has two good rectangular weirs which are located just below the power plant. The men at the plant keep a record of the water passing through the plant.

The Utah Power and Light has established a gaging station about one half mile below their diverting dam. (This is the diverting dam of the Murdock Plant) This station is for the purpose of finding out how much water passes over their dam.

A gage is located at what is known as Best's Bridge on the Provo River. This station is about one mile above the Utah Power and Light dam. This gage has been red during this season.

There is not a suitable measuring device at any of the lakes or reservoirs. We had to take ratings in the channels. Some of the channels were so rough and rocky that a good place could not be found. In most every case the conditions were in favor of a weir and I would recommend that weirs be placed with an automatic gage at each weir. That will only require two of the gages as one can be used for the small lakes and moved to another weir as soon as the water has been drawn out.

These gages are necessary to figure out how much water flows from the lakes.

The lakes are so located that it seems to me that a water commissioner should be placed in the field where he could measure the streams at various places and figure the losses ~~at~~ in transporting the water from the lakes to the river. There is enough work at the lakes to keep one man busy in keeping track of the water from the lakes. I would recommend that a water commissioner be appointed to stay at the lakes and get such information as is needed in order to know how much water is turned from the lakes to the River.

The water from the Big Elk (Washington Irrigation Co.) Lake or reservoir passes over what is called Dry Lake and then flows through a narrow channel. A rating station was made and a gage placed in this channel. The channel is not deep enough for a weir but a good rating flume can be built. An automatic gage should be placed so as to give the quantity of water flowing in the flume from the reservoir.

There was no lake or surface gage to read at the Big Elk Reservoir. I drove a nail in a large pine tree on a level with the surface of the water just above the dam. The Reservoir Company should place a gage so that the depth of water in the reservoir can be read at any time. This is necessary in order for the Water Commissioner to figure the capacity by knowing how much is flowing out or to check on the outflow by knowing the capacity of the reservoir. The Company should also furnish a capacity table or curve for the Water Commissioner.

The Murdock Power Plant has done some repairing on their diverting dam at the head of their pipe line this season. They have fixed the dam so as to use flash boards and thus raise the water during the low water. These flash boards have not been properly used during the months of August and September of this year. By using the flash boards and allowing the water to spill over them into the channel below the flow can be held nearly constant. They have had one gate opened from the bottom letting water pass through and nothing spilling over, then when the pipe line drew more water, the water in the reservoir would lower and more than the natural flow of the river would go down for a while, until the flow in the pipe line decreased and then the water in the reservoir

would have to rise and less water would flow down the river than the natural flow of the river.

The Power Plant has by-passes which can be operated to keep the flow constant whether they have the same power developed or not. The natural flow of the river can be held constant by allowing the water not passing into the pipe line to flow over the flash boards. This will keep the water above the dam nearly constant and by operating the by-passes properly the flow in the tail race can be kept constant. They have two good 8-ft. rectangular weirs in the tail race just below the Power Plant and by reading the hook gage they get the depth flowing over the weirs.

The people in the Wasatch Division do not have the same "duty of water" in all sections. During the high water season they use much more water per acre than when the water is low. Some of the people use a second foot to about 25 or 30 acres in high water and others do not use as much. During the extra high water season a duty of one second-foot for 30 or 35 acres for the Wasatch Division is about what was used this season.

The people cannot irrigate one half of their land with the water given them in the Fulton Decree. Some have not enough water to keep their ditches wet. By watering in turns or rotation, keeping the stream above one second-foot, they can irrigate to better advantage.

Yours Respectfully,

(Signed) George F. Taylor.

DUTY OF WATER.

Tere are no reliable data available on the "duty of water" on the lands irrigated from the Provo River. The manner of use and quantity of water used has been established by the users generally upon the theory that the crop production varies directly with the quantity of water used at all times. This may or may not be true. Various experiments in this and other arid states demonstrate that there is a certain duty in acre-feet per acre, depending upon the soil, and climate, and crops, which is most desirable and economical for any particular district. The manner of application, time of application and various other factors enter into this determination.

Since no experiments along this line have ever been conducted in any of the districts served by the Provo River; and since the proper determination of the rights involved in this cause depends upon the duty of water under the various conditions of soil and climate, your Commissioner earnestly recommends that such a series of experiments be authorized and ordered.

This could very nicely be done separately from the distribution of the waters of the River, by competent, disinterested parties, and in such a proper and thorough manner that the question of "duty" on the lands irrigated by the Provo River would be settled for all time on the proper basis, which is that of crop production per unit of water per acre. This duty, of course would be applicable only during the high and intermediate stages of the River; since below the stage at which there is sufficient water for all the users, the question of priority of right enters in. This question, however, is fairly well determined by Court Decrees and by recognized rights among the users themselves.

The cost of such an investigation would be comparatively great, but in the opinion of your Commissioner, would decrease the total cost in this cause, and possibly in others that might arise in the future, by avoiding otherwise costly and possibly endless litigation.

Valuable assistance along this line could probably be obtained from the Office of the State Engineer and the State Agricultural College.

Pending such a proper determination of duty, your Commissioner recommends that a temporary agreement or stipulation be entered into by the various parties to this action, defining the duty in the several dis-

Duty (2)

tricts, for the guidance of the Court Commissioner in making proper distribution during the period of high and intermediate stages of the River.

During the year 1914, your Commissioner obtained a fairly complete record of the flow of water in 14 of the larger canals of the Provo River system, from which the duty during the year in acre-feet per acre and in acres per second foot of water was computed; in most cases based upon an estimated acreage. The monthly and yearly maximum, minimum and mean duties for the Provo and Wasatch Districts and for the entire River are also computed. Since these measurements extend only over the period of service of your Commissioner and Deputies (from June 1st to September 15th) they do not show the total quantities of water used during the irrigation season. Copies of these data are attached to and made a part of this report.

The question of 2 "duty" confronted your Commissioner during the year 1914, in the matter of the complaint of the Provo Bench Canal and Irrigation Company, Defendant; and the subsequent appeal to your Honor by the Provo Reservoir Company, Plaintiff. In order to determine the question in the best manner, under the circumstances, and for the lack of any data on the duty on Provo Bench, an attempt was made, before and after said appeal, to determine the depth of water applied to the land at each irrigation, on the various kinds of soil; and from the testimony of the users as to the required frequency of irrigations at that time of the year, calculate the required duty in acres per second-foot. A copy of these data are attached to and made a part hereof.

These data submitted herewith show considerable difference rate of use of water and in total water applied to the land, under the various systems, indicating, probably a difference in customary usage as well as a difference in requirements; but since no data were obtained on crop production nor methods of use, it is impossible to make comparisons as to beneficial use.

Diversions Nos. W-1-a-b-c-d- & W-3.

STEWART RANCH COMPANY? WOODLAND.

Small Canals, diverting water directly from Provo River and irrigating approximately 630 acres.

WATER DIVERTED IN 1914.

Month	Quantity acre-ft.	Depth on Land in ft.	Duty in acs. per Sec. ft	Remarks
June	945	1.500	40.0	
July	482 158	0.765	81.0	
August	<u>9-247</u>	<u>0.247</u>	<u>251.0</u>	No water after aug. 24
Totals	1583	2.512		

Average Duty for the year in acres per second foot, 69.0

Diversion No. W-2.

SUNRISE CANAL COMPANY? WOODLAND

One Canal diverting water directly from Provo River and from Bench Creek in the early part of the season, irrigating approximately 500 acres

WATER DIVERTED IN 1914.

Month	Quantity acre-ft.	Depth on Land in ft.	Duty in acs. per sec. ft.	Remarks
June	660	1.320	45.4	
July	541	1.082	57.3	
August	311	0.622	99.7	
Sept. (15 das.)	<u>80</u>	<u>0.160</u>	<u>190.0</u>	
Totals	1592	3.184		

Average duty for the year in acres per second foot, 67.3

Diversion No.w-5.

SOUTH KAMAS IRRIGATION COMPANY, KAMAS?

One canal diverting water directly from Provo River and irrigating approximately 1700 acres.

WATER DIVERTED IN 1914

Month	Quantity acre-ft	Depth on Land in ft.	Duty in acs. per sec Ft.	Remarks
June	2205	1.297	46.2	
July	2033	1.196	51.6	
August	1568	0.922	67.3	
Sept.(15 das.)	<u>--411</u>	<u>0.242</u>	<u>124.0</u>	
Totals	6217	3.657		

Average duty in acres per second foot for the year, 58.5

Diversion NO.w-6.

WASHINGTON IRRIGATION COMPANY KAMAS.

One canal diverting water directly from Provo River and irrigating approximately 1200 acres.

WATER DIVERTED IN 1914.

Month	Quantity acre-ft.	Depth on Land ft.	Duty in acs. per sec. ft.	Remarks
June	1222	1.018	59.0	
July	1192	0.993	62.4	
August	763	0.636	97.5	Stored water 385 ac.ft.
Sept.(15 das.)	<u>121</u>	<u>0.101</u>	<u>299.0</u>	
Totals	3298	2.748	<u>XXx8</u>	

Average dpty for the year in acres per second foot, 77.8 acs.

Diversion No.W-31

TIMPANOGAS IRRIGATION C OMPANY,HEBER.

One canal diverting water directly from Provo River and irrigating approximately 2000 acres.

WATER DIVERTED IN1914.

Month	Quantity Acre-ft.	Depth on Land ft.	Duty in acs.per Sec.ft.	Remarks.
June	3630	1.815	33.0	
July	2788	1.394	44.6	
August(10 das.)	<u>817</u>	<u>0.408</u>	<u>49.0</u>	
Totals	7236	3.617		

Average duty for the year in acres per second-foot, 39.7 acs.

Diversion No.W-35.

WASATCH IRRIGATION COMPANY,HEBER.
NORTH FIELD IRRIGATION COMPANY,HEBER.
EXTENSION IRRIGATION COMPANY,HEBER.
CHARLESTON IRRIGATION COMPANY,CHARLESTON.
SAGE BRUSH IRRIGATION COMPANY,HEBER.

The water is diverted directly from Provo River and is used mainly by the wasatchand North Field Companies. The other canals mentioned above are supplied principally by seepage and from Spring Creek. The combined acreage is approximately 7100 acres. The following data take into account only the water diverted directly from Provo River.

WATER DIVERTED IN1914.

Month	Quantity Acre-ft.	Depth on Land ft.	Duty in Acs.per sec. foot.	Remarks
June	11628	1.638	36.6	
July	9116	1.284	48.3	
August	6452	0.909	68.2	
Sept.(15 Das.)	<u>1782</u>	<u>0.250</u>	<u>120.0</u>	
Totals	28978	4.081		

Average duty for the year in acres per second-foot, 52.4 acres.

8

Diversion NO.P-100.

MIDWAY IRRIGATION COMPANY,MIDWAY.

At least 12 small canals diverting water from Provo River and Snake Creek and from Springs. Two divert from Provo River,two from springs and at least eight from Snake Creek. On account of the large number of canals and lack of proper measuring devices, these data are rather approximate.Acreage approx. 4100 acs.

WATER DIVERTED IN 1914.

Month	Quantity acre-ft.	Depth on Land in ft.	Duty in acs.per sec. Foot	Remarks
June	6000	1.463	41.0	approx.
July	4398	1.072	58.0	
August	2986	0.728	85.1	
Sept. (15 das.)	<u>650</u>	<u>0.160</u>	<u>187.5</u>	
Totals	14034	3.422		

Average duty for the year in acres per second foot, 62.5 acs.

Diversion No. P-1.

PROVO RESERVOIR COMPANY PROVO

One canal diverting water directly from Provo River,and irrigating approximately 4800 acres.

WATER DIVERTED IN 1914.

Month	Quantity acre-ft.	Depth on Land ft.	Duty in Acs per sec ft.	Remarks
June	5785	1.205	50.0	
July	4579	0.954	65.0	
August	4021	0.838	74.0	
Sept.(15 das.)	<u>1377</u>	<u>0.286</u>	<u>104.8</u>	
Totals	15762	3.283		

Average duty for the year 1b acres per second foot,65.2 acs.

Diversion No.P-L-a.

SEGO IRRIGATION COMPANY, PROVO.

The water used by this company is diverted thru the flume of the Utah Power and Light Company, and delivered to the land thru a pipe 7100 feet long which leads from the penstock of the Power Company. The acreage irrigated is 200 acs.

WATER DIVERTED IN 1914.

Month	Quantity in acre-ft.	Depth on Land in ft.	Duty in Acs per sec ft.	Remarks
May	* 335	1.675	37	
June	324	1.620	37	
July	226	1.130	55.0	
August	176	0.880	70.4	
Sept.(15 das.)	<u>72</u>	<u>0.360</u>	<u>83.3</u>	
Totals	1133	5.665		

Average duty for the year in acres pwr second-foot, 48.7

* The quantity used by this diversion during May was determined by determining the capacity of the pipe which was kept running full during this month. This makes the depth on the land 1.675 ft. greater for the year, compared with the other diversions.

Diversion No.P-2.

TIMPANOGAS CANAL COMPANY, PROVO

One canal diverting water directly from Provo River, and irrigating approximately 900 acres.

WATER DIVERTED IN 1914.

Month	Quantity in acre-ft.	Depth on Land in ft.	Duty in Acs per sec. ft.	Remarks
June	1861	2.068	29.0	
July	1432	1.581	39.2	
August	1087	1.208	51.2	
Sept.(15 das.)	<u>568-</u>	<u>0.564</u>	<u>53.2</u>	
Totals	4879	5.441		

Average duty for the year in acres per second-foot, 39.3 acs.

Diversion NO.p-3

PROVO BENCH CANAL AND IRRIGATION COMPANY
PROVO

One canal diverting water directly from Provo River and irrigating
4332 acres.

WATER DIVERTED IN 1914.

Month	Quantity Acres-ft.	Depth on Land ,ft.	Duty in acs.per sec.ft
June	7726	1.783	33.7
July	6101	1.408	44.0
August	5818	1.343	46.2
Sept.(15 Das)	<u>2832</u>	<u>0.654</u>	<u>46.0</u>
Totals	22477	5.188	

Average duty for the year in acres per second-foot, 41.2 acs.

Diversion No.P-4.

WEST UNION CANAL COMPANY ET AL

One canal diverting water directly from Provo River and irrigating
approximately 1900 acres.

WATER DIVERTED IN 1914.

Month	Quantity Acres-ft.	Depth on Land in ft.	Duty in Acres per Remarks Sec. ft.
Month June	3347	1.761	34.1
July	2559	1.347	46.0
August	2325	1.224	50.8
Sept.(15 das.)	<u>1087</u>	<u>0.572</u>	<u>52.6</u>
Totals	9318	4.904	

Average duty for the year in acres per second-foot, 43.6 acs.

8
Diversion No.F-5.

EAST RIVER BOTTOMS WATER COMPANY.
AND ALL USERS OF WATER IN THE EAST RIVER BOTTOMS.

Seventeen (17) small canals diverting water from City Creek.
The acreage irrigated by these canals is very uncertain. The
owners claim about 900 acres, while a survey made under the di-
rection of the plaintiff in this case shows 516 acs. The following
data are based on an acreage of 900.0

WATER DIVERTED IN 1914.

Month	Quantity Acre-ft.	Depth on Land in ft.	Duty in acs. per Sec.ft.	Remarks
June	2871	3.190	18.8	
July	1712	1.902	32.6	
August	1535	1.705	36.5	
Sept.(15 das.)	<u>686</u>	<u>0.762</u>	<u>39.4</u>	
Totals	6804	7.559		

Average duty for the year in acres per second-foot, 28.2 acs.

Diversion No.P-6.

UPPER EAST UNION CANAL COMPANY AND
FAUCITT FIELD DITCH COMPANY, PROVO.

One canal diverting water directly from Provo River and irri-
gating approximately 900 acres.

WATER DIVERTED IN 1914.

Month	Quantity Acre-ft.	Depth on Land in ft.	Duty in acs. per Sec. ft.	Remarks.
June	2078	2.309	26.1	
July	1640	1.822	34.4	
August	1444	1.604	38.8	
Sept.(15 das.)	<u>701</u>	<u>0.780</u>	<u>38.4</u>	
Totals	5863	6.515		

Average duty for the year in acres per second-foot, 32.8 acs.

SUMMARY OF DATA

ON THE USE OF WATER FROM PROVO RIVER FOR IRRIGATION 1914

Provo Division. (7 canals)*****

Month	JUNE		JULY		AUGUST		SEPTEMBER	
	Dep.	Dut.	Dep.	Dut.	Dep.	Dut.	Dep.	Dut.
Max.	3.190	18.8	1.902	32.6	1.705	36.5	0.780	38.4
Min.	1.205	50.0	0.954	65.0	0.838	74.0	0.286	104.8
Mean	1.991	30.1	1.449	42.8	1.257	49.3	0.568	53.0

Wasatch Division. (7 canals)

Max.	1.815	33.0	1.394	44.6	0.922	67.3	0.250	120.0
Min.	1.018	59.0	0.765	81.0	0.247	251.0	0.000	0.000
mean	1.247	48.1	0.958	64.7	0.550	112.7	0.107	280.4

Entire Provo River. (14 Canals)

Max.	3.190	18.8	1.902	32.6	1.705	36.5	0.780	38.4
Min.	1.018	59.0	0.765	81.0	0.247	251.0	0.000	00.0
Mean	1.619	37.1	1.203	51.5	0.904	68.6	0.337	90.0

* In the columns headed Dep. are given the maxima, minima, and mean depths on the land, or the quantity in acre-feet per acre for each month. In the columns headed Dut. are given the equivalent "duties" in acres per second-foot. The acreage in most cases is approximate as shown in the accompanying table of measurements. Since the acreage in most cases is probably in excess of the true values, the quantities ~~and~~ of water per acre as shown above are probably less than the true values.

These data are not submitted as indicating an economical "duty of water", but merely to show, as nearly as may be, the rate of use and quantities used.

The measurements from which the computations were made are submitted herewith, and will show, in a general way, the degree of accuracy which might be expected in each case.

EXPERIMENTAL IRRIGATIONS

ON

PROVO BENCH*****1914

Tract No.1-John Stratton.

July 26,1914.

Area- 3.53 Acres.
Soil-Sandy Loam.
Sub Soil- Gravelly
Crops-Fruit trees & alfalfa.
Length- 603 feet
Width- 253 feet

Measurements of flow by
Current meter.
Average Flow-9.15 sec.ft.
Time- 9:40 to 1:40...4 hrs.
Quantity of water in ac.ft
3.050
Depth on land-0.864 ft or
10.37 inches.

The tract was irrigated the long way,from East to West.

Tract No.2- Arthur Marriot.

July 30,1914.

Area---1.90 acs.
Soil-Sandy loam about 3.5
to 10 feet deep.
Subsoil- Gravelly.
Crops- Alfalfa
Length- 483 feet
Width- 171 Feet.

Measurements of flow by
current meter.
Average Flow.- 4.765 sec.ft.
Time-1:05 to 3:00 p.m.
1 hr. 55 min.
Quantity of water in
acre-feet- 0.397
Depth on land-.4000 ft or
4.80 inches

The tract was irrigated the long way,from East to West.

Tract No.3-.....Grandall

August 10,1914.

Area-~~10.83~~ 10.83 acres.
Soil-Gravelly,clay loam.
Sub soil- Gravel.
Crop- Alfalfa.
Slope- 1.75% to west.
Length- 1255 feet
Width- 376 feet

Measurements of flow by
means of a 4-foot rectan-
gular weir.
Average flow- 3.18 sec.ft.
Time- 7:15 a.m. to 8:15 p.m.
13 hours.
Quantity of water in acre-ft.
3.44
Depth on land-0.318 ft. or
3.82 inches.

The tract was irrigated the long way,from East to West.
At 4:10 p.m. there was approximately 8.00 acres irrigated.
3:18 sec ft. for 9 hours equals 2.385 ac.ft. or a depth
.2.98 ft. over 8.00 acres.

Tract No.4.- Barney Biglow.

August 11,1914.

Area--9.63 acres.
Soil- Gravelly Clay Loam.
Sub Soil- Gravel.
Crops- Alfalfa & Fruit.
Slope- 1% to South.
Length- 662 feet
Width- 632 feet.

Measurements of flow by
means of 3-ft. submerged
weir.
Average flow- 3.96 sec.ft.
Time-7:15 a.m. to 4:00 p.m.
8 hrs. 45 min.
Quantity of water in acre-
ft. 2.90
Depth on land-0.301 ft or
3.61 inches.

This tract was irrigated the long way,from North to South.

Tract No.5.- James A. Loveless.

August 11,1914

Area- 7.52 acres.
 Soil- Gravelly Clay loam.
 Sub Soil- Gravel.
 Crops- Alfalfa and Fruit.
 Slope- 0.7% to South.
 Length- 1300 feet.
 Width- 250 feet.
 Measurements of flow by
 current meter.
 Average flow- 7.86 sec.ft

Time- 9:00 a.m. to 2:00
 p.m.- 5.00 hrs.
 Quantity of water in acre-
 feet- 3.276
 Depth on land- 0.435 ft.or
 5.22 inches.

At 11:00 a.m.there was approximately 4.70 acres irri-
 gated. 7.86 sec.ft for 2 hrs is 1.31 acre-feet,or a depth
 on the land of 0.28 ft. or 3.36 inches.

Tract No.6.- W.A.Marriot.

August 22,1914.

Area--- 4.08 acres
 Soil- Sandy loam.
 Sub Soil- Gravel.
 Crops- Fruit trees and alfal-
 fa.
 Length 686 feet.
 Width- 259 feet.
 Measurements of flow
 by current meter.

Average flow- 3.87 sec.ft.
 Time-1:30 P.M. to 6:00
 p.m.equals 4½ hrs.
 Quantity of water in acre-
 feet 1.42 acre-ft.
 Depth on alnd-0.348 ft. or
 4.18 inches.

The irrigation of this tract was thorough. Some water ran
 off at the lowwr end on account of imperfext regulation.
 This was estimated at 0.07 ac.ft. and is deducted from the t
 total water applied. From evidence in a three-foot hole
 the water had reached a depth of 3 feet,3 hours after its
 application.

Tract No.7.- William Downs.

August 22,1914.

Area- 2.35 acres.
 Soil- Gravelly Clay loam.
 Sub Soil- Gravel.
 Crops- Fruit trees,straw-
 berries and raspberries.
 Length- 396 feet.
 Width- 246 feet.Also a tract
 50x100 feet at the west end.

Measurement of flow by
 current meter.
 Average flow- 3.30 sec.ft.
 Time-1:00 p.m. to 2:30 p.
 m. 1½ hours.
 Quantity of water in acre-
 feet- 0.412.
 Depth on land-0.175 ft.or
 2.00 inches.

The irrigation of this tract was fair,the slightly irreg-
 ular. There was a small quantity of water ran off,while
 inplaces it did not run through the length of the tract
 The irrigation was by the furrow method,there being 5 fur-
 rows between the rows of trees.

Tract No.8.- Newell J.Knight.

August 25,1914.

Area- 1.71 acres.
 Soil- Sandy,Gravelly loam.
 Sub Soil- Gravelly.
 Crops- Raspberries & potatoes.
 Measurements of flow.by
 current meter.
 Average flow- 4.30 sec.ft.
 Time-4:25 p.m.to 6:10 p.m.
 1¾ hours.

Quantity of water in ac.
 ft. 0.627.
 Depth on land- 0.366 ft.or
 4.39 inches.

The raspberries were irrigated by the furrow method,but
 the tract was so narrow that the surface was almost en-
 tirely flooded. At 5:30 the water was running off the West
 end,fromwhere it was conveyed ina waste ditch to thwe potatoes.

OF

*****E(E*****

Remund ditch

Michel Ditch.

Spring Creek and Sage Brush

[illegible]

Midway Irrigation Company et al

[illegible]

Nelson Ditch.

Averett Ditch

Diversion No.P-113.

Snake Creek Ditch

Approximate Acreage.....30.20

July 2.....2.60 sec.ft July 14.....3.00 sec.ft.
July 17.....1.67 " "

Diversion No.P-114.

Charleston-Midway Ditch.

Approximate Acreage..... 144.60

July 2..... 1.36 sec.ft. July 14.....0.00 sec.fyt.

Diversion No.P-122.

Daybell Springs

Approximate Acreage.....250.0

July 15.....4.27 sec.ft.

Diversion No.P-105.

Charleston Irrigation Company (Upper Canal)

Approximate Acreage.....7002.0

June 17.....65.63 sec.ft. July 1.....30.60 sec.ft.
July 14.....30.60 " " August 20.....14.50 " "
August 22.....20.00
10.00

Diversion No.P-124.

Charleston Irrigation Company (Lower Canal)

Approximate Acreage.....472.50

June 18..... 27.19 sec.ft. July 31.....17.00 sec.ft.
est.
July 3.....27.20 " " August 7.....17.00 " "
July 15.....27.20 " " August 2021.00 " "
July 21.....19.70 " " August 22.....21.00
12.00

Diversion No.P-125

Pioneer Irrigation Company.

Approximate Acreage.....455.0

June 18.....19.61.sec.ft. July 15.....9.82 sec.ft.

Diversion No.P*~~SPX~~-S-F-1

Giles and Thomas Ditches(South Fork)

Approximate Acreage.....75.0

June 26.....2.50 second-feet.

Diversion No.P-N-F-1

Conrad Brothers.

Approximate Acreage.....Unknown.

June 26.....2.00 sec.ft.

Diversion No.P-N-F-2.

Wildwood Resort Company.

Approximate Acreage.....8.0

June 26.....0.00 sec.ft.

Diversion No.P-1

Provo Reservoir Company.

Approximate Acreage.....48000

JUNE		JULY		AUGUST		SEPTEMBER.	
Day	Sec.ft.	Day	Sec.ft	Day	Sec.ft.	Day	Sec.ft.
3	100.51	6	80.00	1	76.50	1	63.00
26	94.50		68.00		77.00		53.22
30	80.00	13	74.00	3	77.00	5	42.22
			80.00		68.50	7	41.17
		19	69.30	5	67.20		42.22
			60.00	6	66.50	9	42.22
		22	69.00		72.00	10	42.22
		25	64.13	11	66.50	12	41.54
		30	67.00		57.20	14	59.24.
		31	77.00	12	60.00		
					57.20		
				19	60.20		
					65.20		
				25	64.70		
					62.70		
				26	62.70		
				30	62.70		

Diversion No.P-1-a.

Sego Irrigation Com pany.

Approximate Acreage.....200.0

JUNE		JULY		AUGUST		SEPTEMBER.	
Day	Sec.ft.	Day	Sec.ft	Day	Sec. ft.	Day	Sec.ft.
5	5.39	6	5.40	1	3.00	1	2.80
26	5.39		3.00	3	2.80	5	2.80
		8	3.00	6	3.00	7	2.80
			4.00	11	2.80	9	2.80
		13	3.00	12	2.80	10	2.80
			4.00	15	2.80	12	2.80
		19	3.00	19	2.80	14	0.00
		31	3.00	22	2.80		
				25	2.80		
				26	2.80		
				30	2.80		

Diversion No.P-2

Approximate Acs.900- Timpanogas Canal Company.

JUNE		JULY		AUGUST		SEPTEMBER.	
Day	Sec.ft.	Day	Sec.ft.	Day	Sec.ft.	Day	Sec.ft.
3	27.33	6	30.00	1	21.20	1	18.00
26	34.46	8	29.00	3	21.20	7	17.40
			22.50		18.00	9	18.00
		13	29.00	6	18.00	12	15.39
			22.50	11	16.20	14	15.39
		19	18.40		18.00		
			18.00	12	18.00		
		22	17.80	15	18.00		
			18.00	19	16.40		
		25	20.00		18.00		
			19.00	25	16.00		
		30	18.00		14.25		
				26	14.60		
				30	18.00		

Diversion No.P-3.

Provo Bench Canal and Irrigation Company.

Acreage..... 4332.5

JUNE		JULY		AUGUST		SEPTEMBER.	
Day	Sec.ft.	Day	Sec.ft.	Day	Sec.ft.	Day	Sec.ft.
3	136.10	1	120.00	1	104.50	1	93.00
26	122.00	3	105.00		106.00		104.20
		13	107.00	3	104.00	7	101.50
			108.30		106.00	9	104.40
		19	87.00	5	101.30	10	79.73
			86.70		106.00	12	72.85
		22	90.00	6	103.50	14	91.33
		25	88.50		106.00		
		28	88.50	11	100.50		
			97.00		90.60		
		30	106.00	12	93.50		
				15	92.00		
					86.70		
				19	87.00		
				25	84.20		
					82.80		
				26	84.90		
				30	93.60		

Diversión No.P-4.

West Union Canal Company and Others.

Approximate Acreage.....1900.

JUNE		JULY		AUGUST		SEPTEMBER.	
Day	Sec.ft.	Day	Sec.ft.	Day	Sec.ft.	Day	Sec.ft.
3	53.34	6	42.90	1	40.90	1	37.80
25	58.02	8	43.80		37.80	7	42.28
		13	43.80	3	40.90		37.80
			47.50		37.80	12	35.16
		19	37.80	6	37.70	13	23.58
			38.00	11	37.80		
		22	39.12	12	37.80		
		25	38.52	15	43.80		
		30	37.80		37.80		
		31	37.80	19	34.00		
					37.80		
				25	37.80		
				26	37.80		
				30	37.80		

Diversión No.P-6.

Upper East Union Canal Company et al.

Approximate Acreage..... 900.0

JUNE		JULY		AUGUST		SEPTEMBER.	
Day	Sec.ft.	Day	Sec.ft.	Day	Sec. ft.	Day	Sec.ft.
6	29.22	6	45.00	1	26.10	1	23.20
25	40.00	8	32.32		23.20	7	25.68
		13	32.32	3	27.20		23.20
		19	23.22		23.20	12	25.68
			25.00	6	23.20	14	15.00
		22	30.24	11	23.20		
		25	28.32	12	23.20		
			23.20	15	27.20		
		30	23.20		23.20		
		31	23.20	19	23.20		
				25	20.10		
					23.20		
				26	23.20		
				30	23.20		

Diversión No.P-8.

Provo City.

Approximate Acreage.....2800 and Power.

JUNE		JULY		AUGUST		SEPTEMBER.	
Day	Sec ft.	Day	Sec.ft.	Day	Sec.ft.	Day	Sec.ft.
3	132.50	6	90.00	1	114.40	7	111.30
26	130.40		120.00		118.00		115.00
		8	135.00	3	90.90	12	100.93
			137.50		118.00	14	105.75
		13	137.50	6	131.70		
		18	80.10		118.00		
		19	103.00	11	101.80		
			115.00		115.00		
		22	119.00	12	118.08		
		25	115.50	15	98.95		
		28	118.00		115.00		
		31	118.00	19	129.95		
					115.00		
				25	120.70		
					115.00		
				26	115.00		
				30	115.00		

The above measurements include 8.33 sec.ft which is taken as the flow in the water-works system.

Diversion No.P-5.

East River Bottoms Water Company et al.

Approximate Acreage.... 900.0

JUNE		JULY		AUGUST		SEPTEMBER.	
Day	Sec.ft.	Day	Sec.ft.	Day	Sec.ft.	Day	Sec.ft.
3	50.97	6	29.78	1	18.00	7	20.96
26	44.88	8	37.46	3	33.00	19	19.64
		13	37.46		18.00	12	29.52
			22.50	6	20.90	14	14.87
		18	18.46		18.00		
		19	18.00	11	24.90		
		22	26.40	15	30.80		
		25	26.40		26.30		
				19	27.20		
					26.30		
				25	24.50		
					26.30		
				26	26.30		
				30	26.30		

Diversion No.P-9.

Little Dry Creek Irrigation Co.

Approximate Acreage.....500.00

JUNE		JULY		AUGUST		SEPTEMBER.	
Day	Sec.ft.	Day	Sec.ft.	Day	Sec.ft.	Day	Sec.ft.
6	7.04 7.04	6	10.93	3	10.00	1	7.00
25	11.35	8	6.86	6	6.86		9.63
		13	6.86		10.00	7	7.00
		19	9.63	11	5.80		9.63
			10.00		10.00	12	4.89
		22	7.40	15	5.80		
		25	8.30		10.00		
				19	5.80		
					10.00		
				25	4.90		
					9.63		
				26	9.63		
				30	9.63		

Diversion No.P-10.

Lake Bottom Canal Company.

Approximate Acreage.....1275.

JUNE		JULY		AUGUST		SEPTEMBER.	
Day	Sec.ft.	Day	Sec.ft.	Day	Sec.ft.	Day	Sec. ft.
6	16.27						
25	15.42			26	9.86		

Diversion No.P-11.

Fort Field Canal Company.

JUNE		JULY		AUGUST		SEPTEMBER.	
Day	Sec.ft.	Day	Sec.ft.	Day	Sec.ft.	Day	Sec. ft.
June 6.....	0.29	July 8.....	3.00	Aug. 6.....	7.03	" "	
June 25	5.40	Aug. 26.....	7.03	" "		" "	

Diversion No. P-S-1

George Taylor Ditch.

Approximate Acreage..... 16.50

June 8.....0.00	sec.ft.	July 8.....0.00
June 26.....0.00	" "	

$$\frac{1}{15} + \frac{1}{6} + \frac{1}{18} + \frac{1}{9} + \frac{1}{8} + \frac{1}{12} + \frac{1}{24} + \frac{1}{36} + \frac{1}{45} + \frac{1}{60} + \frac{1}{72} + \frac{1}{90} + \frac{1}{108} + \frac{1}{120} + \frac{1}{144} + \frac{1}{160} + \frac{1}{180} + \frac{1}{216} + \frac{1}{240} + \frac{1}{270} + \frac{1}{324} + \frac{1}{360} + \frac{1}{432} + \frac{1}{480} + \frac{1}{540} + \frac{1}{648} + \frac{1}{720} + \frac{1}{864} + \frac{1}{960} + \frac{1}{1080} + \frac{1}{1296} + \frac{1}{1440} + \frac{1}{1728} + \frac{1}{1920} + \frac{1}{2160} + \frac{1}{2592} + \frac{1}{2880} + \frac{1}{3240} + \frac{1}{3840} + \frac{1}{4320} + \frac{1}{4860} + \frac{1}{5760} + \frac{1}{6480} + \frac{1}{7680} + \frac{1}{8640} + \frac{1}{9600} + \frac{1}{11520} + \frac{1}{12960} + \frac{1}{15360} + \frac{1}{17280} + \frac{1}{19200} + \frac{1}{23040} + \frac{1}{25920} + \frac{1}{30720} + \frac{1}{34560} + \frac{1}{38400} + \frac{1}{46080} + \frac{1}{51840} + \frac{1}{57600} + \frac{1}{69120} + \frac{1}{76800} + \frac{1}{92160} + \frac{1}{103680} + \frac{1}{115200} + \frac{1}{138240} + \frac{1}{153600} + \frac{1}{172800} + \frac{1}{207360} + \frac{1}{230400} + \frac{1}{276480} + \frac{1}{307200} + \frac{1}{368640} + \frac{1}{409600} + \frac{1}{486720} + \frac{1}{540800} + \frac{1}{655360} + \frac{1}{737280} + \frac{1}{873600} + \frac{1}{972800} + \frac{1}{1177600} + \frac{1}{1306880} + \frac{1}{1589760} + \frac{1}{1747200} + \frac{1}{2119680} + \frac{1}{2361600} + \frac{1}{2873600} + \frac{1}{3225600} + \frac{1}{3916800} + \frac{1}{4377600} + \frac{1}{5299200} + \frac{1}{5913600} + \frac{1}{7168000} + \frac{1}{7932800} + \frac{1}{9728000} + \frac{1}{10848000} + \frac{1}{13177600} + \frac{1}{14772800} + \frac{1}{18227200} + \frac{1}{20416000} + \frac{1}{24908800} + \frac{1}{27648000} + \frac{1}{33977600} + \frac{1}{37920000} + \frac{1}{46169600} + \frac{1}{51264000} + \frac{1}{62432000} + \frac{1}{69472000} + \frac{1}{85472000} + \frac{1}{95424000} + \frac{1}{116736000} + \frac{1}{129728000} + \frac{1}{158976000} + \frac{1}{175680000} + \frac{1}{216704000} + \frac{1}{241920000} + \frac{1}{296704000} + \frac{1}{332160000} + \frac{1}{408256000} + \frac{1}{452640000} + \frac{1}{552320000} + \frac{1}{616320000} + \frac{1}{757376000} + \frac{1}{840960000} + \frac{1}{1029760000} + \frac{1}{1144320000} + \frac{1}{1409728000} + \frac{1}{1566720000} + \frac{1}{1927040000} + \frac{1}{2147200000} + \frac{1}{2643776000} + \frac{1}{2938880000} + \frac{1}{3604352000} + \frac{1}{4018560000} + \frac{1}{4927488000} + \frac{1}{5457600000} + \frac{1}{6687360000} + \frac{1}{7427200000} + \frac{1}{9073728000} + \frac{1}{10032000000} + \frac{1}{12343040000} + \frac{1}{13689600000} + \frac{1}{16776960000} + \frac{1}{18585600000} + \frac{1}{22790400000} + \frac{1}{25324800000} + \frac{1}{31063040000} + \frac{1}{34368000000} + \frac{1}{42169600000} + \frac{1}{46656000000} + \frac{1}{56988800000} + \frac{1}{62832000000} + \frac{1}{77217280000} + \frac{1}{85632000000} + \frac{1}{104737280000} + \frac{1}{116160000000} + \frac{1}{142976000000} + \frac{1}{158976000000} + \frac{1}{195904000000} + \frac{1}{217728000000} + \frac{1}{267833600000} + \frac{1}{297888000000} + \frac{1}{366435200000} + \frac{1}{406856000000} + \frac{1}{497748800000} + \frac{1}{548760000000} + \frac{1}{671736000000} + \frac{1}{742720000000} + \frac{1}{907372800000} + \frac{1}{1003200000000} + \frac{1}{1234304000000} + \frac{1}{1368960000000} + \frac{1}{1677696000000} + \frac{1}{1858560000000} + \frac{1}{2279040000000} + \frac{1}{2532480000000} + \frac{1}{3106304000000} + \frac{1}{3436800000000} + \frac{1}{4216960000000} + \frac{1}{4665600000000} + \frac{1}{5698880000000} + \frac{1}{6283200000000} + \frac{1}{7721728000000} + \frac{1}{8563200000000} + \frac{1}{10473728000000} + \frac{1}{11616000000000} + \frac{1}{14297600000000} + \frac{1}{15897600000000} + \frac{1}{19590400000000} + \frac{1}{21772800000000} + \frac{1}{26783360000000} + \frac{1}{29788800000000} + \frac{1}{36643520000000} + \frac{1}{40685600000000} + \frac{1}{49774880000000} + \frac{1}{54876000000000} + \frac{1}{67173600000000} + \frac{1}{74272000000000} + \frac{1}{90737280000000} + \frac{1}{100320000000000} + \frac{1}{123430400000000} + \frac{1}{136896000000000} + \frac{1}{167769600000000} + \frac{1}{185856000000000} + \frac{1}{227904000000000} + \frac{1}{253248000000000} + \frac{1}{310630400000000} + \frac{1}{343680000000000} + \frac{1}{421696000000000} + \frac{1}{466560000000000} + \frac{1}{569888000000000} + \frac{1}{628320000000000} + \frac{1}{772172800000000} + \frac{1}{856320000000000} + \frac{1}{1047372800000000} + \frac{1}{1161600000000000} + \frac{1}{1429760000000000} + \frac{1}{1589760000000000} + \frac{1}{1959040000000000} + \frac{1}{2177280000000000} + \frac{1}{2678336000000000} + \frac{1}{2978880000000000} + \frac{1}{3664352000000000} + \frac{1}{4068560000000000} + \frac{1}{4977488000000000} + \frac{1}{5487600000000000} + \frac{1}{6717360000000000} + \frac{1}{7427200000000000} + \frac{1}{9073728000000000} + \frac{1}{10032000000000000} + \frac{1}{12343040000000000} + \frac{1}{13689600000000000} + \frac{1}{16776960000000000} + \frac{1}{18585600000000000} + \frac{1}{22790400000000000} + \frac{1}{25324800000000000} + \frac{1}{31063040000000000} + \frac{1}{34368000000000000} + \frac{1}{42169600000000000} + \frac{1}{46656000000000000} + \frac{1}{56988800000000000} + \frac{1}{62832000000000000} + \frac{1}{77217280000000000} + \frac{1}{85632000000000000} + \frac{1}{104737280000000000} + \frac{1}{116160000000000000} + \frac{1}{142976000000000000} + \frac{1}{15897600000000000$$

Diversion No. P-S-2.

George and Ashted Taylor Ditch

Approximate Acreage.....3.50

July 8.....0.00 Sec.ft.

[illegible]

Diversion No. P-S-3.

Partridge Ditch.

Approximate Acreage..... 37.86.

July 8.....2.14 s.ft. August 26.....1.31 sec, ft.

❖ ❖

Diversion No. P-S-4

Stephen Jones Ditch

Approximate Acreage.....8.00

July 8.....0.00 sec.ft. August 26.....0.00 sec ft.

[illegible]

Diversion No. P-S-5.

Roy Brown Ditch.

Approximate Acreage.....70.0

July 8.....1.50 sec.ft Aug 26.....1.15. sec.ft.

[illegible]

Diversion No. P-S-6

Clyde Ditch

Approximate Acreage.....75.00

June 26.....	5.89 sec.ft.	July 8.....	2.00 sec.ft.
		Aug. 26.....	0.80
			1.31

[illegible]

Diversion No. P-S-7.

Clyde-Davis Ditch

Approximate Acreage.....10.0

June 26.....0.00 sec.ft. Aug. 26.....0.00 ~~0.00~~ sec.ft.
1.31

July 8.....2.50 " "

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

Diversion No. P-S-8. Tanner Farm Ditches.

June 26.....4.24 sec.ft. July 8.....1.64. Sec.ft.
August 26.....0.00

ADMINISTRATION
OF
COURT ORDERS AND DECREES.

For the proper administration of the decrees of the Court, and the equitable distribution of the waters of Provo River thereunder, the following information and equipment should be available:

- (1) Requirements per acre served or "duty", during high and intermediate stages of the River.
- (2) Acreage irrigated under each diversion.
- (3) Priority of rights as a guide in low water.
- (4) Proper means for the measurement of water diverted.

As a guide to an agreement for the coming irrigation season (1915) your Commissioner has the following suggestions and recommendations to submit:-

(1) That, pending a proper determination of "duty", a temporary agreement be entered into by the parties to this action.

(2) That the acreage irrigated by each diversion be determined by a competent surveyor; and that a certificate signed by such, showing the acreage irrigated, be submitted by the users under each canal before the beginning of the irrigation season. At the present time, those canals whose true acreage is known cannot be fairly allowed water on the same basis as those whose acreage is estimated; for the reason that the number of acres estimated by the users under any one canal is usually in excess of the truth.

That

(3) The priority of right among the users of water from Provo River is fairly well defined, except in few cases, by Decrees of Court or by agreement among the irrigators.

(4) That every canal which has not a proper device for the measurement of the water diverted be required to install such device before the beginning of the irrigation season. That in every case where conditions are favorable, a suppressed or a trapazoidal weir be required.

With the above mentioned information and equipment made available to the Commissioner, the cost of measurement and distribution will be very much reduced.

For the administration of the orders of the Court in this cause, for the year 1915, your Commissioner recommends the following organization~~x~~-and personnel;-

(1) A commissioner having charge of the entire River System, to begin his services not later than March 1st, in order to design and install proper measuring devices, where needed, before the beginning of the irrigation season. He could very well attend to all the necessary work until the time when it became necessary to distribute water to the various canals. After this time he could, with very little assistance, and with proper measuring devices, attend to the distribution in all of Wasatch and Summit Counties. He should have authority to employ assistants for short periods when necessary during the period of distribution.

(2) A commissioner, or deputy commissioner to have charge of the distribution of the water to the users in Utah County, to begin his services as soon as it becomes necessary to distribute water in the Provo district, which would probably be sometime in the month of June.

(3) A deputy commissioner or assistant located at the reservoirs of the Union Reservoir Company, to begin his services as soon as the reservoirs are filled, in order to keep a record of the natural outflow for as long a period as possible before the stored water is released; thus securing data upon which to base a calculation as to the probable natural outflow during the drawing period. These same data should be obtained for the Reservoir of the Washington Irrigation Company, either by the same Deputy or another assistant. Your Commissioner is of the opinion that one man could not attend to the two systems on account of the distance between and ruggedness of the intervening country. The deputy or deputies should be competent to make proper measurements of streams by means of weir or current meter.

and expenses of the commissioners

The payment for the services should be based on acreage and length of the irrigation season, since it is impossible to keep an accurate record of the water diverted by the small canals which use intermittantly.

The payments should be made by the Clerk of the Court out of a fund paid in advance by the parties to this action, according to the estimated share of each; the excess, if there be any being refunded at the end of the season. This method would relieve the Commissioners of the

trouble and annoyance of collecting a large number of small bills and permit of his devoting all his time to the more important work of measurement and distribution.

The Commissioner should be given authority to compel the installation of measuring devices, by court order giving him power, if necessary to have them installed at the expense of the users under the canal in any case of refusal or neglect to comply with his request. The users who are indifferent in this respect increase the expense and annoyance for those who comply with the requirement.

The proper distribution of water in the Provo district was made especially difficult during 1914 on account of a lack of information as to the rights of the East River Bottom Water Company and other users claiming the right to water as "The Residents of The River Bottoms", as defined in the Morse Decree of this Court. Your Commissioner was unable to learn, from these users or from any other source, the division of this right between the above mentioned corporation or company and the individual users.

Since these users divert water into 17 small canals from the channel known as City Creek, through which Provo City draws its supply; it is very important that the rights of these two groups of users (The East River Bottom Water Company and other "Residents of The River Bottoms") be defined, and placed under proper regulation, in order to insure Provo City against irregularities in its supply, such as occurred during 1914.

Therefore your Commissioner recommends that (1) a proper weir be placed in City Creek near its head, to measure the total flow into this channel, and (2) that The East River Bottom Water Company and the other individuals mentioned above be required to define their rights by agreements or otherwise, and to furnish the Commissioner or other person authorized to distribute the waters of the River each year, a copy of the schedule showing the time that each diversion will use water during that year.

2885

Report of Frank Fleming,
for 1914.

IN DIST. COURT
UTAH CO. UTAH
FILED

FEB 13 1915

E. J. Palfreyman CLERK
E. J. Palfreyman DEPUTY